Observational Signatures of Magnetic Reconnection

Magnetic reconnection is often referred to as the primary source of energy release during solar flares. Directly observing reconnection occurring in the solar atmosphere, however, is not trivial considering that the scale size of the diffusion region is magnitudes smaller than the observational capabilities of current instrumentation, and coronal magnetic field measurements are not currently sufficient to capture the process. Therefore, predicting and studying observationally feasible signatures of the precursors and consequences of reconnection is necessary for guiding and verifying the simulations that dominate our understanding. I will present a set of such observations, particularly in connection with long-duration solar events, and compare them with recent simulations and theoretical predictions.